SPACE TEST PROGRAM OISLSAT PROGRAM RESEARCH AND DEVELOPMENT ANNOUNCEMENT (PRDA) – 01-20
STP OISL PRDA Number:01-20
Primary POC: Contact Maria Aurora Vigil, Contract Negotiator, (505) 846-8543, e-mail address Maria.Vigil@Kirtland.af.mil
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DESCRIPTION:

A. INTRODUCTION:

(1) Headquarters Space and Missile Systems Center (SMC), Test and Evaluation Directorate (TE), Space Test Program (STP), solicits white papers from interested offerors identifying new and innovative engineering solutions which provide timely and cost-effective spacecraft integration of Air Force payloads as described in Section B of the PRDA below. This PRDA is being acquired under the procedures of AFMC SUBPART 5335.90, Program Research and Development Announcements (PRDA). This is an unrestricted solicitation to United States business organizations. Foreign owned firms are advised that they will not be allowed to participate at the prime contractor level. Small businesses are encouraged to respond to this solicitation. Offerors must be registered in the Department of Defense Central Contractor Registration database in accordance with Defense FAR Supplement (DFARS) Part 204.7302 to be eligible for contract award. ***THIS ANNOUNCEMENT CONSTITUTES THE SOLICITATION, DO NOT SUBMIT A FORMAL PROPOSAL AT THIS TIME.*** Interested offerors are encouraged to contact 2Lt Thomas (Lee) Philley, at (505) 846-6406, or by email: Thomas.Philley@Kirtland.af.mil, or Eleni (Sam) Sims, at (505) 846-7047 or by e-mail: Eleni.M.Sims@aero.org prior to committing resources in preparing submission of white papers. ***The purpose of the communication is to preclude unwarranted effort on the part of the offeror whose work is not of interest to the Government.***

(2) WHITE PAPER INSTRUCTIONS:

Offerors are required to submit a ten (10) page or less white paper, and a separate one (1) page Rough Order of Magnitude (ROM) per satellite solution. The ROM should include the major cost elements with a cover letter. The white paper(s) should address the following information: Section A: Title: Name of Company, Projected Period of Performance, and dates when experiments are required. Section B: Technical Summary: Include physical experiment integration data. Offerors otherwise have latitude as to what information is presented in the white papers. Evaluation of the white paper(s) will be performed by a technical evaluation team to determine overall technical merit and interest to the Government. Offerors that submit white paper(s) found to be of interest to the Government may be requested to submit formal technical and cost proposals by a specific date**.** Any resultant award associated with this PRDA is subject to the Availability of Funds. ***Such invitation does not assure that the submitting organization will be awarded a contract.*** Government technical evaluators may contact offerors before completion of the initial evaluation of the white papers as deemed necessary to gain additional information to complete evaluations. Such dialog will most likely be conducted telephonically, but may be done in writing (e-mail) or face-to-face as required. To reduce contractor expense, the Government will keep such interchange to the minimum time necessary. White papers submitted in response to this OISLSat PRDA shall be submitted by 2 Mar 2001, at 1600 Mountain Standard Time. The government reserves the right not to evaluate white paper(s) received after the cut-off date specified herein. The Government also reserves the right to amend this PRDA at any time prior to formal proposal solicitation. Offerors should be alert for any amendments that may be published. White papers should be addressed to: Space & Missile Systems Center, Contracting Division, 3550 Aberdeen Avenue SE, Building 413, Room 115, Kirtland Air Force Base NM 87117-5776; Attention: Aurora Vigil.

B. REQUIREMENTS:

(1) TECHNICAL DESCRIPTION:

A) STP has a requirement to build one (but will consider two) small satellite(s) to fly as many as possible of the following Space Experiments Review Board (SERB) experiments: High Speed Optical Intersatellite Link (OISL), Cibola Flight Experiment (CFE), Coherent Electromagnetic Radio Tomography (CERTO), Computerized Ionospheric Tomography Receiver in Space (CITRIS), Micro-Electrostatic Analyzer (MESA), Wafer Scale Signal Processing (WSSP), and Micro-Electromechanical Based Autonomous On-Orbit Satellite Inspection Experiment (MEPSI). Detailed information on each experiment can be found (further referred to as

the SMC/TE website) at http://www.te.plk.af.mil/Contracts/Procurements.html (reference OISL PRDA #01-20).

B) The Government requires that the OISL experiment be the core payload on the first satellite. The Government desires that the CFE experiment be on the same satellite if possible, but will consider it as the core payload on a second satellite. Any combination of the remaining experiments on either satellite is acceptable. If offerors select the two-satellite solution, two (2) white papers may be submitted.

C) The Government requires that each satellite both mechanically and electrically interfaces with the EELV Secondary Payload Adapter (ESPA) ring and the environments associated with a vertical interface plate (vs. a horizontal interface plate). In order to appropriately fit the ESPA ring, the base of each satellite shall be limited to 61cm x 61cm (24" x 24"), and the height shall be limited to 96.5cm (38") – assuming "base" refers to the ESPA interface plate. The mass of each satellite is also limited to 181 kg (400 lbs.) - assuming the center of gravity is no more than 51cm (20") radially (in the "height" direction) from the interface plate (see SMC/TE website for more ESPA information).

D) The Government requires each satellite to have a NSA-approved uplink and downlink encryption scheme via Cardholder and Pegasus, respectively (see Section D (6) for government furnished equipment associated with communication security).

E) The launch vehicle will be a Boeing Delta IV-Medium, 4-meter fairing. A copy of the Delta IV Payload Planner's Guide can be viewed or downloaded at http://www.boeing.com/defense-space/space/delta/delta4/guide. The Delta IV-M will launch from Kennedy Space Center, FL in October 2004 into a 25-45 deg inclination, 600-800 km circular orbit (exact orbit is still to be decided).

F) The Government plans on providing satellite Telemetry, Tracking, and Commanding (TT&C) via the Air Force Satellite Control Network (AFSCN) and Research, Development, Test and Evaluation (RDT&E) Support Complex (RSC) at Kirtland Air Force Base, with experiment data distribution provided via the RSC and the Internet. However, the offeror may propose other means of TT&C and data distribution; the offeror must address the cost of these means in the cost proposal. If the offeror chooses to use the AFSCN and the RSC, the spacecraft TT&C subsystem shall be compatible with the RSC and the AFSCN according to AFSCN Standardized Interface Specification 000502 (SIS-502). Offerors shall support launch and on-orbit operations for twelve (12) months. Offerors shall provide on-site personnel support for all launch and on-orbit operations rehearsals (four rehearsals expected) at the RSC (or proposed Satellite Operations Complex). Offerors shall provide command and telemetry specifications, data formats, conversions and calibrations, SV operations information, launch support and readiness information, training, and required training materials. Offerors shall provide network requirements to the RSC.

G) This mission is unique in that it is the first planned flight of the ESPA ring. Therefore, satellites with conservative designs are more attractive to the Government. However, the Government will consider all feasible solutions.

H) The Government expects the total cost of this effort (including spacecraft bus development, experiment integration, and operations support (excluding the actual on-orbit operations) for one or two satellites) to be approximately twelve (12) million dollars.

(2) SUPPORTING DOCUMENTATION:

Offerors can review/download the following documents on the SMC/TE website: The Experiment Requirements Matrix, ESPA Ring Specifications, a Points of Contact list, a list of government furnished equipment, any amendments to this PRDA.

C. DELIVERABLE ITEMS:

Contract Funds Status Report, Integrated Master Schedule, Experiment to Spacecraft Interface Control Document (ES ICD), design review data packages, System Test Plan, Spacecraft System Specification, Transportation and Handling Plan, Test Reports, Program Requirements Document, On-Orbit Operations Handbook, Support for launch and on-orbit operations rehearsals at the RSC (or proposed Satellite Operations Complex), Software User's Manual, Space Vehicle Handbook, Space Vehicle Training, Ground Specification Document, Command and Telemetry Handbook. Offerors may propose additional deliverable items.

D. PROPOSAL PREPARATION INSTRUCTIONS:

(1) PART I - TECHNICAL PROPOSAL:

A) Cover Page: include the PRDA title and reference number, name and telephone number for the principal points of contact (both technical and contractual), and any other information that identifies the proposal. The cover page should also contain the proprietary data disclosure statement, if applicable (see D (7)).

B) Table of Contents: include immediately following the cover page.

C). Technical Approach:

1) Background/Scope/Program Objectives: The technical proposal must convey an understanding of the problems or limitations of the general technology and the intended solutions. It should be an overall summary of the technical issues addressed by the offeror's proposal without merely repeating the requirements. This should provide a vision of what will ultimately be achieved and what solutions this effort will produce.

2) Program Plan: The program plan should represent an orderly progress of the technical and management efforts to be performed. Upper and lower bounds should be placed on what will be provided or investigated within the confines of program funding. Some redundancy is inevitable but should be used judiciously to stress key points.

3) Technical Discussion: The offerors should provide technical detail and analysis necessary to support the technical approach they are proposing. Offerors should clearly identify the core of the intended approach. All "new and creative" solutions to specific problems should be stated in this area. The proposal should include a risk assessment of key technical, schedule or cost areas and their potential impact on the program. If subcontractors are proposed, identify what task(s) they are to perform. The offeror shall reference/acknowledge all specified data items in the Contract Data Requirements List (CDRL) that were published in the announcement.

4) Program Schedule: The schedule should represent the offeror's plan to perform the program tasks in an orderly manner. Provide each major task identified in the Statement of work (SOW) as a separate line on the program schedule chart.

D) Capabilities and Relevant Experience: Offerors should identify Government/Commercial contracts, previous or related work, and facilities or resources proposed for this effort.

E). Management:

1) Program Organization: Identify the program organization.

2) Management Approach: Identify management approach to assure contract completions (e.g., meeting schedule, cost and program goals).

(2) PART II – OFFEROR STATEMENT OF WORK (SOW).

The SOW developed by the offeror and included in the proposal may be incorporated into a binding contract. Developing the SOW as a separate and distinct part of the proposal (PART II) will allow the Government to incorporate it with minimal time and effort. The proposed SOW must contain a summary description of the technical methodology as well as the task description, but not in so much detail as to make the contract inflexible. DO NOT include any proprietary information in the SOW. (A recommended SOW format is located on the SMC/TE website).

(3) PART III - COST/PRICE PROPOSAL:

The Contractor shall execute a Certificate of Current Cost or Pricing Data, as defined in FAR 15.406-2. If offerors propose the two-satellite solution to the PRDA, each satellite effort shall be separately priced.

(4) GENERAL INSTRUCTIONS:

Proposals must reference the OISLSat PRDA number 01-20.

1) Anticipated Period of Performance: The total length of this PRDA effort is expected to be approximately 52 months from contract award.

2) Expected Award Date: 1 June 2001. Type of Instrument and Contract Type may be proposed by the Offeror's proposals shall be valid for a minimum of 180 days. Offerors shall submit an original proposal (clearly identified as such) and three (3) copies, plus one electronic copy. The electronic copy must be compatible with Windows 95, and, as applicable, be submitted using the following programs: Microsoft (MS) Word 97 (PDF format acceptable), MS excel 97, MS Project 98 and MS Power Point 97. The electronic copy

shall be on 3.5-inch diskette or CD-ROM. Page size shall be limited to 8.5 x 11 inches with one-inch top, bottom, and side margins. Text shall be single spaced and written in 12-point /Times New Roman font. Pages shall be sequentially numbered. Offerors are advised that only the Contracting Officer is legally authorized to contractually bind or otherwise commit the government. The Government reserves the right to procure all, part, or none of the offeror's proposal.

(5) OTHER DOCUMENTATION:

Legible tables, charts, graphs and figures shall be used wherever practical to depict organizations, systems and layouts, implementation schedules, plans, etc. These displays shall be uncomplicated, and shall not exceed 11 by 17 inches in size. Foldout pages shall fold entirely within the volume and may only be used for large tables, charts, graphs, diagrams and schematics, and not for pages of text. Foldout pages will be counted as two pages. If foldout pages have print on both sides, the foldout will be counted as four pages. For tables, charts, graphs, and figures, the text shall be no smaller than 12-point font size. Binding and labeling: Each volume of the proposal should be separately bound in a three-ring loose-leaf binder that permits the volume to lie flat when open. Staples shall not be used. A cover sheet should be bound in each book, clearly marked with volume number, title, copy number, and solicitation.

(6) GOVERNMENT FURNISHED EQUIPMENT:

National Security Agency (NSA) approved spacecraft hardware and software required for uplink and downlink (Cardholder and Pegasus, respectively) communication security; NSA approved ground support equipment (KI-17); ESPA interface drill template; all necessary experiment electrical and mechanical ground support equipment; experiment thermal models; experiment finite element models; and experiment inputs to all documentation (including ES ICD) as necessary.

(7) SECURITY:

Potential offerors should apply the restrictive notice prescribed in the provision in FAR 52.215-1(e), Instructions of Offerors-Competitive Acquisitions, to any restrictions on disclosure or use of data contained in their proposal(s) on the title page: ***The proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed, in whole or in part, for any purpose other than to evaluate this proposal. If, however, a contract is awarded to this offeror as a result of, or in connection with the submission of these data, the Government shall have the right to duplicate, use, or disclose these data to the extent provided in the resulting contract.*** This restriction does not limit the Government's right to use the information contained in the proposals if they are obtained from another source without restriction. Each restricted data sheet should be marked as follows: ***Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this proposal.***

E. BASIS FOR AWARD:

The proposals will be evaluated by a peer or scientific review process in accordance with the evaluation criteria listed below in descending order of importance.

(1). The overall scientific and technical merits of the proposal, including capabilities and related experience, facilities, techniques or unique combination of these which are integral factors for achieving proposal objectives.

A). Approach to meeting the objectives of the PRDA. This criterion is comprised of two sub-categories in descending order of importance.

a) Soundness–having a firm basis, based on valid reasoning; sensible, thorough, complete; deserving confidence.

b) Creativity–using imagination, past experience and available technology that when uniquely combined results in viable solutions and processes.

B). Past Performance. Past performance evaluation represents the evaluation of an offeror's relevant present and past work record to assess the Government's confidence in the offeror's ability to successfully perform as proposed. The Government will evaluate the offeror's demonstrated record of contract compliance in supplying products and services that meet user's needs, including cost and schedule.

C). Proposal Risk. Proposal Risk assessment includes the potential for the disruption of schedule, increased cost, degradation of performance, and the need for Government oversight. It also considers the likelihood of unsuccessful contract performance for any reason, including lack of experience and/or facilities.

(2). Cost will contribute substantially to the selection decision.

(3). Government evaluators will rank proposals and recommend award(s) based upon proposal compliance with criteria found in this section. Number of contracts awarded will be based upon availability of Government funds. No further evaluation criteria will be used in selecting proposals.

(4) Once the evaluation is completed, all proposals are categorized into three categories *as defined in* AFMCFAR Supplement 5335.016-90(d.2).

A) Category I: Well conceived, scientifically and technically sound proposals requiring further development and are recommended for acceptance and normally are displaced only by other Category I proposals.

B) Category II: Scientifically or technically sound proposals requiring further development and are recommended for acceptance, but are at a lower priority than Category I.

C) Category III: Proposals not technically sound or do not meet agency needs.

(5). Subject to the availability of funds, the Government reserves the right to select for award any, all, part, or none of the proposals. Interested offerors may view and download the proposal preparation and cost instructions by accessing (http://www.eps.gov) (At the FedBizOpps homepage, select Venders, USAF Offices, Air Force Material Command Location).

F. NOTICE OF USE OF NON-GOVERNMENT EVALUATORS:

Offerors are advised that employees of Aerospace Corporation will assist the Government in performing the evaluations of proposals submitted under this announcement. They will be authorized access to all portions of the proposal data and discussions.

G. SUBMISSION:

Proposals must be received by 1600 hours Mountain Standard Time, 27 Apr 01. Proposals should be addressed to: Space & Missile Systems Center, Contracting Division, 3550 Aberdeen Avenue SE, Building 413, Room 115, Kirtland Air Force Base NM 87117-5776; Attention: Aurora Vigil. If Offerors are unfamiliar with the PRDA policy and procedures for the solicitation, receipt, evaluation, and requests for proposals, see the http://farsite.hill.af.mil/, copies of AFMCFAR subpart 5335.90 PRDA.

H. POINTS OF CONTACT:

(1) Technical POC Program Manager: 2Lt Thomas (Lee) Philley, at (505) 846-6406.
(2) Contracting POC, Aurora Vigil, Contracts Negotiator at (505) 846-8543.
(3) SMC Ombudsman: Mr. William Orzech, (310) 363-0588 before contacting the Ombudsman, potential offerors should first refer to the Contracting Officer, Ms Odette Denman at (505) 846-9147.